ABSTRACT

To a polycrystalline silicon layer crystallized by irradiation with laser light, a mixed gas comprised of ozone gas and H_2O or N_2O gas is fed at a processing temperature of 500°C or below, or the polycrystalline silicon layer is previously treated with a solution such as ozone water or an aqueous NH_3/hydrogen peroxide solution, followed by oxidation treatment with ozone, to form a silicon oxide layer of 4 nm or more thick at the surface of the polycrystalline silicon layer for forming a thin-film transistor having less variations of characteristics on an unannealed glass substrate.